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REMARKS

These amendments and remarks are being filed in response to the final Office Action dated June 29, 2004. For the following reasons this amendment should be entered, the application allowed, and the case passed to issue.

No new matter or considerations are introduced by this amendment. The amendments to claims 1 and 29 are supported by claim 5 and the specification at paragraph 051, which clearly disclose that the second protection device drains water in the fuel cell when the fuel cell stops running, wherein the second protection device comprises a vessel which reserves water drained from the fuel cell, and the second protection device returns water stored in the vessel to the fuel cell when the fuel cell restarts. No new considerations are raised by this amendment, as claims 1 and 29 have been amended in accordance with the proposal discussed during the personal interview of September 14, 2004.

Claims 1-53 are pending in this application. Claims 1-6, 8, 17, and 29 are rejected. Claims 1 and 29 have been amended in this response. Claims 7, 9-16, 18-28, and 30-53 are withdrawn. Claim 5 has been canceled in this response.

Interview Summary

Applicants gratefully acknowledge the courtesy of Examiner Alejandro in granting a personal interview with the undersigned on September 14, 2004. During the interview, the undersigned asserted that there was support for the claim limitations added to claims 1 and 29 in the previous response, and that the instant fuel cell system was distinguishable over the Bonville patent. Examiner Alejandro maintained that there was no support in paragraphs [0050] and [0051] for the negative limitation, "the second protection device not returning the drained water to the fuel cell while protecting the fuel cell." As regards the prior art rejection, the Examiner

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agreed that draining water from the fuel cell after the fuel cell stops running, storing the drained water in a container, and returning the water to the fuel cell after restarting appears to be distinguishable over Bonville. The Examiner indicated that paragraph [0051] of the specification contained sufficient functional language that could be added to claims 1 and 29 to overcome the prior art rejection.

Restriction

As the two groups of restricted claims are drawn to a product and process, and Applicants have elected the product, Applicants request rejoinder of the process claims upon the allowance of a product claim, pursuant to MPEP § 821.04.

Specification

The amendment filed 5/10/04 was objected to under 35 U.S.C. § 132 because it allegedly introduced new matter into the specification. The Examiner asserted that the following limitation added to claims 1 and 29 were supported by the original disclosure:

“the second protection device/means not returning the drained water to the fuel cell while protecting the fuel cell.”

This objection is traversed, and reconsideration and withdrawal thereof respectfully requested.

Claims 1 and 29 have been amended in this response and the asserted new matter has been deleted.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-6, 8, 17, and 29 were rejected under 35 U.S.C. 102(e) as being anticipated by Bonville (U.S. Patent No. 6,248,462). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the instant invention as claimed, and the cited prior art.

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An aspect of the present invention, per claim 1, is a fuel cell system comprising a fuel cell having a water passage and a passage for gas required to generate power. The fuel cell system also includes a first protection device which prevents freezing of water in the fuel cell by maintaining the temperature of the fuel cell and a second protection device which prevents freezing of water in the fuel cell by draining water in the fuel cell when the fuel cell stops running. The second protection device comprises a vessel which reserves water drained from the fuel cell, and the second protection device returns water stored in the vessel to the fuel cell when the fuel cell restarts. In addition the fuel cell system comprises a controller functioning to select one of the first protection device and second protection device as the protection device to be used when the fuel cell has stopped, and protect the fuel cell by operating the selected protection device when the fuel cell has stopped.

An aspect of the present invention, per claim 29, is a fuel cell system comprising a fuel cell having a water passage and a passage for gas required to generate power. The fuel cell system also includes a first protection means which prevents freezing of water in the fuel cell by maintaining the temperature of the fuel cell and a second protection means which prevents freezing of water in the fuel cell by draining water in the fuel cell when the fuel cell stops running. The second protection means comprises a vessel which reserves water drained from the fuel cell, and the second protection means returns water stored in the vessel to the fuel cell when the fuel cell restarts. In addition the fuel cell system comprises means which selects one of the first protection means and second protection means as the protection means to be used when the fuel cell has stopped.

The Examiner asserted that Bonville discloses an apparatus for thermal management of a fuel cell assembly with a plurality of thermal management loops in contact with the fuel cell assembly and a heat exchanger. A controller 45 controls the thermal management loops and

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regulates the heat exchanger and a pump. The system further comprises temperature sensors. A coolant circulates through a cool flow channel.

Bonville, however, does not anticipate the claimed fuel cell system because Bonville does not disclose first and second protection devices or means which prevent freezing of water in the fuel cell, wherein the second protection device or means prevents freezing of water in the fuel cell by draining water in the fuel cell when the fuel cell stops running, comprises a vessel which reserves water drained from the fuel cell, and returns water stored in the vessel to the fuel cell when the fuel cell restarts, as required by claims 1 and 29.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the disclosure in a single reference of each element of a claimed invention. *Helifix Ltd. v. Blok-Lok Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 399, 36 USPQ2d 1101 (Fed. Cir. 1995); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). Because Bonville does not disclose first and second protection devices or means which prevent freezing of water in the fuel cell, wherein the second protection device or means prevents freezing of water in the fuel cell by draining water in the fuel cell when the fuel cell stops running, comprises a vessel which reserves water drained from the fuel cell, and returns water stored in the vessel to the fuel cell when the fuel cell restarts, as required by claims 1 and 29.

Applicants further submit that Bonville does not suggest the claimed fuel cell system.

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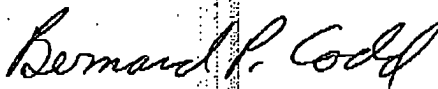
Dependent claims 2-6, 8, and 17 are allowable for at least the same reasons as independent claim 1 and further distinguish the claimed fuel cell system.

In view of the above remarks, Applicants submit that this amendment should be entered, the application allowed, and the case should be passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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